

BPSC 2020 - Monday 13 January

08:30 Registration				
09:00 WELCOME - Colin Wilson				
Outer planet atmospheres				
09:10	Leigh	Fletcher	Leicester University	Jupiter's tropical circulation revealed via Juno radiometry and ground-based infrared spectroscopy
09:23	Peter	Read	Oxford University	Modelling Jupiter's Dynamic Weather Layer: Turbulence, Clouds & Moist Convection
09:36	Patrick	Irwin	Oxford University	Exploring Clouds and Composition of Ice Giants with Ground- and Space-Based Telescopes Using Visible/Near-IR
09:49	Naomi	Rowe-Gurney	Leicester University	Longitudinal Variations in the Stratosphere of Uranus from the Spitzer Infrared Spectrometer
10:02	Michale	Roman	Leicester University	Uranus and Neptune in the Mid-Infrared: Atmospheric Temperatures and Circulation Inferred from Thermal Imaging
10:15	Karen	Aplin	Bristol University	Atmospheric Ionisation and Lightning at the Ice Giant Planets
10:28	Affelia	Wibisono	UCL/MSSL	Temporal and Spectral Studies of Jupiter's X-Ray Aurorae with XMM-Newton During a Compression Event
10:41	Richard	Haythornthwaite	UCL/MSSL	Fast and slow water ion populations in the Enceladus plume
10:55 COFFEE				
Atmospheres posters: authors in attendance				
Terrestrial Planet atmospheres				
11:25	Sarah	Rugheimer	Oxford University	Detecting Pre-Biosignatures in the Atmospheres of Earth-Like Planets around Other Stars
11:38	Robert	Graham	Oxford University	Energetic and Thermodynamic Limits on Continental Silicate Weathering Strongly Impact the Habitability of Wet, Rocky Worlds
11:51	Greg	Colyer	Oxford University	Multiple Superrotating States in an Idealized Model of the Atmosphere of Venus, a Slowly-Rotating Terrestrial Planet
12:04	Martin	Airey	University of Reading	Laboratory experiments to investigate the effects of galactic cosmic ray ionisation on cloud droplet behaviour in Venus' atmosphere
Astrobiology				
12:17	Claire	Cousins	St Andrews University	Sulfur Biogeochemistry and ^{34}S Biosignatures in a Cold, Hypersaline Arctic Spring
12:30	Michael	Macey	Open University	Colour Peak – an analogue environment for late Noachian Mars
12:43	Jianxun	Shen	St Andrews University	Biogeochemical Nutrient Dynamics and Microbial Communities in the Ataca-ma Desert, A Mars Analog
12:56	Arola	Moreras Marti	St Andrews University	Are $\delta^{13}\text{C}$ and quadruple S isotopes robust biosignatures in Mars-relevant geothermal systems?
13:10 LUNCH				
Astrobiology posters: authors in attendance				
14:10	Nisha	Ramkissoon	Open University	The identification of potential martian biosignatures using a flow-through simulation chamber
14:23	Graham	Purvis	Newcastle University	Combining Morphological And Organic Geochemical Evidence For The Detection Of Fossilised Life On Mars
14:36	Sam	Halim	Birkbeck	Assessing the survivability of biomarkers within terrestrial material impacting the lunar surface
14:49	Zoe	Morland	Open University	Transfer of Biomarkers in the Phobos-Mars System: Hyper-Velocity Impact Investigations Using a Light Gas Gun
15:02	Annemarie	Pickersgill	Glasgow University	Searching for Bioalteration in Impact Glasses
Meteorites & sample return				
15:15	Jane	MacArthur	Manchester University	The Lost Meteorites of Antarctica: Meteorites from the First Field Season
15:28	Ashley	King	Open University	How many asteroids do the CM carbonaceous chondrites sample?
15:45 COFFEE				
Meteorites posters: authors in attendance				
16:15	Richard	Greenwood	Open University	What is the oxygen isotope composition of Venus? The case for sample return from Earth's "sister" planet
16:28	Martin	Suttle	NHM	Relationships between hydrated carbonaceous chondrites: investigating the link between CO-CM-CY chondrites and ^{16}O -poor micrometeorites
16:41	Rhian	Jones	Manchester University	Mobility of Halogen Elements in Ordinary Chondrite Breccias
16:54	Thomas	Harvey	Manchester University	Geochemical and textural analysis of metal particles entrained in impact melt in CBA chondrite Gujba
17:07	Aimee	Smith	Manchester University	Formation Conditions of Silica-Rich Igneous Rims around Chondrules in CR Chondrites: an Experimental Approach
17:20	Samantha	Bell	Manchester University	Timescales of magma transfer in Apollo 15 mare basalts obtained through Fe-Mg diffusion modelling in olivine and pyroxene crystals
17:33	Aine	O'Brien	Glasgow University	Comparing bulk and in situ techniques to analyse Martian organic material in preparation for Exomars, Mars 2020 and Mars sample return
17:46	Leon	Hicks	Leicester University	Fe-redox changes in Itokawa space weathered zones
18:00 END OF DAY 1				
evening STUDENT SOCIAL EVENT - DETAILS TBA				

BPSC 2020 - Tuesday 14 January

08:30 Registration / doors open

Mars - geomorphology

09:00	Matt Balme	Open University	Aram Dorsum: an Extensive Noachian-Age Fluvial Depositional System in Arabia Terra, Mars
09:13	Alfiah Putri	UCL/MSSL	Mapping of dynamic change phenomena on Mars and their relationship to underlying physical constraints
09:26	Robert Barnes	Imperial College, London	Three-Dimensional reconstruction and quantification of fluvial-deltaic sedimentary deposits in Gale Crater, Mars, from rover-derived digital outcrop models
09:39	Yu Tao	UCL/MSSL	3D multi-resolution mapping of Valles Marineris for improved understanding of RSL formation mechanisms
09:52	Divya Persaud	UCL/MSSL	Stratigraphy in a Channel in Gale Crater, Mars, from 3D HiRISE Imagery
10:05	Joel Davis	NHM	Syn-tectonic Sedimentation in Valles Marineris: a Punctuated Decline of Water on Mars?
10:18	Adam Parkes Bowen	Leicester University	Using band ratioed CaSSIS imagery to characterise Oxia Planum's clay-bearing unit
10:31	John Bridges	Leicester University	The Mineralogical Record of Groundwater-Sediment Reactions in Gale Crater

10:45 COFFEE

Mars - fluid-surface interactions

11:15	Lucy Kissick	Oxford University	An archive of atmospheric CO ₂ in the Martian rock record
11:28	Neil Arnold	Cambridge	Predicting possible liquid water locations beneath Mars' south polar ice cap
11:41	Hannah Chinnery	Open University	The Penetration of Solar Radiation into Martian Ice Analogues
11:54	Frances Butcher	Sheffield University	Internal Structure of A Mid-Latitude Glacier on Mars
12:07	Matthew Sylvest	Open University	Experimental Investigation of The Action of CO ₂ Sublimation in Martian Landscape Evolution
12:20	Sarah Boazman	NHM	Quantifying Dune and Ripple Migration in Valles Marineris, Mars: A Source-to-Sink Aeolian system.
12:33	Steven Banham	Imperial College, London	The reconstruction of ancient compound aeolian bedforms in Gale crater, Mars
12:46	Susan Conway	Nantes University	Molards on Mars and Mercury: Signs of Volatile Loss

13:00 LUNCH

Planetary surfaces

14:00	Jan-Peter Muller	UCL/MSSL	3D Imaging Tools and Geospatial Services from Joint European-USA Collaborations
14:13	Maxim Chernetskiy	UCL/MSSL	3D Imaging of the Moon for the NASA Artemis Human Exploration Programme
14:26	Graeme Hall	Leicester University	The distribution of peak-ring basins on Mercury and their correlations with the high-Mg/Si terrane
14:39	Chris Malliband	Open University	Potential identification of sublimation-driven downslope mass movements on Mercury
14:52	Mark Burchell	Univ. of Kent at Canterbury	Destroying Icy Ocean Worlds
15:05	Mark Fox-Powell	St Andrews University	Freezing-Induced Fractionation of Ice, Glass and Salts from Simulated Enceladus Ocean Fluids
15:18	Rachael Hamp	Open University	Modelling Water-Rock Interactions in the Sub-surface Environment of Enceladus
15:31	Oliver King	Leicester University	Compositional Mapping of Europa with VLT/SPHERE

15:45 COFFEE

Surface & interior posters: authors in attendance

Planetary interior processes

16:15	Tom Pike	Imperial College, London	Results from the Short-Period (SP) seismometers on the Mars Insight Mission
16:28	Anna Horleston	Bristol University	The Marsquake Service for Insight: Results from the First Year of Operations on Mars
16:41	Peter Grindrod	NHM	How does Venus Lose its Heat? Global Implications of Small-scale Resurfacing
16:54	Ghail Richard	Royal Holloway, London	Jostling Crustal Block Activity on Venus Driven by Subcrustal Rejuvenation
17:07	Marissa Lo	Manchester University	Modelling the Ascent and Eruption of Picritic Lunar Magmas
17:20	Dan Spencer	Oxford University	Magmatic segregation and volcanism on Io
17:33	David Pegg	Open University	Commonplace Multiple Volcanic Eruptions on Mercury and their Implications
17:46	David Rothery	Open University	The Asymmetry of Nathair Facula: a Volcanologic Mystery on Mercury

18:00 EVENING RECEPTION - MUSEUM OF NATURAL HISTORY

20:00 END OF DAY 2

BPSC 2020 - Wednesday 15 January

08:30 Registration / doors open

Missions / Facilities / Tools

09:00	Sabina Raducan	Imperial College, London	Numerical Simulations for Planetary Defence Missions
09:13	Luke Daly	Glasgow University	The UK Fireball Network; A New Camera Network Aiming to Recover Meteorite Falls in the UK
09:26	Niranjan Thatte	Oxford University	Observing Solar System Objects with HARMONI@ELT
09:39	Carlo Convenevole	Cranfield University	Lunar SOURCE: A concept for a Lunar SOUNDing Radar Cubesat Experiment
09:52	Neil Bowles	Oxford University	The Lunar Trailblazer mission: Understanding the Moon's water
10:12	Geraint Jones	UCL/MSSL	Comet Interceptor: An ESA Mission to an Ancient World
10:32	Richard Ghail	Royal Holloway, London	The M5 EnVision Venus Orbiter

10:50 COFFEE **Missions / Facilities / Tools Posters: authors in attendance**

11:20	Ralph Lorenz	JHU/APL	The Dragonfly New Frontiers Mission to Titan
11:40	Sara Russell	NHM	European Involvement in JAXA'S Mars Moons Exploration (MMX) Sample Return Mission to the Martian Moons
12:00	Andrew Coates	UCL/MSSL	The PanCam instrument for the Rosalind Franklin (ExoMars 2020) rover
12:20	Matt Balme	Open University	Opportunities for Involvement in the Exomars Programme
12:40	Monica Grady	Open University	LARES: Laboratory Analysis for Research into Extraterrestrial Samples

13:00 LUNCH

Discussion

14:00	Sue Horne	UKSA	UKSA exploration programme update
14:10			Discussion on post-ExoMars exploration programme
14:30	Robert Massey	RAS	RAS update
14:50	James Endicott	SPAN	Space and Planetary Action Network
15:10	Ineke de Moortel	SSAP	STFC Solar System Advisory Panel / Solar System Roadmap
15:30			UK Planetary Forum (TBC)
15:35			Panel discussion / Q & A

16:00 END OF DAY 3

4pm-6pm Splinter meeting for discussion of LARES : Lab Analysis for Research into Extraterrestrial Samples (TBC)
Martin Wood Lecture Theatre

BPSO 2020 - POSTER PROGRAMME

Group 1 posters: display Monday and Tuesday morning				Atmospheres	Authors at posters : Monday am	
Group 1 posters: display Monday and Tuesday morning	Martin Wood Foyer	James	Blake	Leicester University	Saturn's Seasonal Atmosphere: Cassini CIRS contrasts to VLT and IRTF observations	
		Arrate	Antunano	Leicester University	Fluctuations in Jupiter's Quasi-Quadrennial Oscillation from Ground-based data	
		Padraig	Donnelly	Leicester University	Mapping Jupiter's Temperatures, Aerosols and Ammonia via VLT/VISIR Imaging in 2016	
		Ralph	Lorenz	JHU/APL	Initial Observations of the Mars Surface Environment Using the Insight Solar Arrays	
		Megan	Brown	Open University	Investigating the Relationship Between Ozone and Water-Ice Clouds Using Retrieved Data from the Exomars Trace Gas Orbiter	
		Alex	Valeanu	Oxford University	From spacecraft data to rover measurements – Martian atmospheric modelling and observations	
			Juan	Alday Parejo	Oxford University	Vertical profiles of isotopic ratios in H2O and CO2 in the Martian atmosphere as observed by ACS onboard the ExoMars Trace Gas Orbiter
			Astrobiology		Authors at posters : Monday lunchtime	
			David	Slade	Open University	Methane production by Methanococcus marisnigri in a simulated martian subsurface environment
			Lot	Koopmans	St Andrews University	Microbial Morphologies through the Eyes of the Exomars Close-Up Imager
			Mara	Leite	Westminster University	Analysis of human-commensal microbes at a Mars Analog habitat
			Meteorites & sample return		Authors at posters : Monday afternoon	
	Simpkins Lee room	Lukas	Adam	Leicester University	The Challenges of Basic Characterisation of Mars Material under Containment	
		Evangelos	Christou	Glasgow University	Martian alteration vs terrestrial contamination in the apatite of the unique Martian meteorite NWA 8159	
		Jack	Piercy	Leicester University	Carbonate precipitation and dissolution in Lafayette and its effects on the evolution of the Nakhlite fluid	
		Paul	Schofield	NHM	Constraining the nature of water: Rock interaction in Nakhrites using trace element signatures of alteration minerals	
		Enrica	Bonato	NHM	The effect of metamorphic heating on the organic matter and amorphous silicates in CO chondrites	
		Pierre-Etienne	Martin	Glasgow University	Petrological Characterization of the Carbonaceous Chondrite Aguas Zarcas: Implications for Understanding Asteroid Ryugu	
		Natasha	Almeida	NHM	Relict Forsterite in Unequilibrated Estatite Chondrites	
		Helena	Bates	NHM	Thermal Infrared Spectral Signature of Aqueously and Thermally Metamorphosed CM and CY Chondrites	
		Mariana (Sabrina)	Troncoso	Manchester University	Primary and Secondary Features of Chondrules and Refractory Inclusions in the Anomalous CM Chondrite Nwa11346: Insights into Early Solar System Alteration of CM C-Chondrite Asteroids	
		Benjamin	Farrant	Manchester University	Noble Gas and Halogen Behaviour During Impact Melt Processing in the Early Inner Solar System	
		Sammy	Griffin	Glasgow University	Assessing the relationship between crystal orientation and shock in the Yamato nakhlites	
		Robert	Steele	St Andrews University	Chondrule formation and mixing in the early Solar System: insights from Ni isotope compositions of chondrules	
	Ross	Findlay	Open University	Investigating Oxygen Isotope Heterogeneity in CM Carbonaceous Chondrite Regolith Breccias		
Group 2 posters: display Tuesday afternoon & Wednesday	Simpkins Lee room	Surface & Interiors		Authors at posters : Tuesday pm		
		Peter	Fawdon	Open University	Continuing Characterization of Oxia Planum, the Landing Site for the Exomars Rosalind Franklin Rover	
		Zach	Dickeson	NHM	Topographic and Morphological Study of a Potential Palaeolake and Drainage System in the Oxia Planum Catchment	
		Amelie	Roberts	St Andrews University	Buried and Degraded Impact Craters in Oxia Planum, Mars	
		Roger	Stabbins	NHM	Hematite through the eyes of the ExoMars 2020 Rover <i>Rosalind Franklin</i> : Simulating mineral identification with the <i>PanCam WAC</i> multispectral filters	
		Robert	Seidel	Open University	Hydrothermal Alteration in the Frankenstein Gabbro Martian Analogue: First Models	
		Jack	Wright	Open University	Geological Mapping of Mawrth Vallis, Mars: First Look	
		Joe	McNeil	Open University	The Nature of Remnant Rounded Mounds North of The Exomars 2020 Landing Site	
		Melissa	Mirino	Open University	A morphological classification to facilitate a comparison between Martian and Terrestrial inverted channels.	
		Jacqueline	Campbell	UCL/MSSL	The Search for Organic Signatures within Dynamic Features on the Martian Surface	
		Neil	Arnold	Cambridge	Modelling Esker Formation on Mars	
		Benjamin	Fernando	Oxford University	High-frequency modelling of the effects of 3D crustal structure and atmospheric sources detected by InSight on Mars	
		Natalia	Wojcicka	Imperial College, London	Seismic Moment and Efficiency of Small Impacts on Mars	
		Donald	Bowden	Leicester University	Plutonic Igneous Float Rocks at Ireson Hill, Gale Crater, Mars	
		Edward	Baker	Oxford University	Crystallization of a model silicate Moon	
		David	Pegg	Open University	Geological Mapping of the Debussy Quadrangle (H-14) of Mercury	
		Chris	Malliband	Open University	1:3M Geological mapping of the Derain (H-10) quadrangle of Mercury	
		Benjamin	Man	Open University	Geological Mapping of the Neruda Quadrangle (H-13), Mercury	
	Mark	Nottingham	Manchester University	Apollo 12 Regolith Cosmic Ray Exposure Ages		
			Missions, Facilities, Tools		Authors at posters : Wednesday am	
		Elyse	Allender	St Andrews University	Multiscale and Multispectral Mars Analogue Observations in Preparation for Exomars 2020	
		Amy	Dugdale	Open University	Development of Oxia Planum Simulant Relevant to Exomars Mission	
		Thomas	Harvey	Manchester University	Photogrammetry for creating high fidelity 3-D models of geological and meteorite samples	
		Sara	Motaghian	NHM	The First Look at Mars with PanCam: ExoMars2020 spectral instrument suite emulator data of Martian Meteorites	
	Luke	Daly	Glasgow University	Gearing Up for Hayabusa 2: Establishing Atom Probe Tomography for Analysis of Ryugu Samples		
	Mark	Burchell	Univ. of Kent at Canterbury	Hypervelocity Impact Facility - University Of Kent		
	James	McKevitt	Loughborough University	ASTRAEUS: Aerial-Aquatic Titan Mission Profile		
	Michael	Johnson	Imperial College, London	In-Situ manufacturing of software defined spacecraft		
	Manish	Patel	Open University	BEERS: Benefits of the ESA Exploration Roadmap in Socioeconomics		